

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claim 2, AMEND claims 1, 3, 4 and 6 and ADD new claims 7-16 in accordance with the following:

1. (currently amended) A computer-aided design (CAD) system having a modeling mechanism that uses both two-dimensional and three-dimensional views of a solid object in an integrated manner, comprising:

two-dimensional drawing generating means for generating a plurality of orthographic projection views representing ~~two-dimensional drawing that represents~~ a three-dimensional model being defined as a collection of three-dimensional geometric features;

two-dimensional drawing display means for displaying the generated ~~two-dimensional drawing~~ orthographic projection views on a monitor screen;

graphic element selection means for selecting a graphic element contained in the orthographic projection views ~~two-dimensional drawing being~~ displayed on the monitor screen; and

three-dimensional feature selection means for identifying one of the three-dimensional geometric features that corresponds to the graphic element selected by the graphic element selection means, and setting the identified geometric feature to a selected state for further manipulation.

2. (canceled)

3. (currently amended) The CAD system according to claim [2]1, wherein:

the two-dimensional drawing display means displays a projection view of each geometric feature on the monitor screen, according to a line of sight defined for the orthographic projection views ~~two-dimensional drawing~~; and

the graphic element selection means selects a graphic element in the orthographic projection views of the geometric features provided by the two-dimensional drawing display means.

4. (currently amended) The three-dimensional CAD system according to claim 1, wherein:

the two-dimensional drawing generating means produces ~~a~~ an orthographic projection ~~two-dimensional~~ view of each of the three-dimensional geometric features constituting the three-dimensional model, ~~as well as~~ and maintains data about associations between graphic elements contained in the produced orthographic projection views ~~two-dimensional views~~ and the three-dimensional geometric features; and

the three-dimensional feature selection means identifies one of the three-dimensional geometric features that corresponds to the graphic element selected by the graphic element selection means, based on the data maintained by the two-dimensional drawing generating means.

5. (original) The three-dimensional CAD system according to claim 1, wherein the graphic element selection means makes the identified geometric feature appear with emphasis, in contrast to other features shown in a three-dimensional view on the monitor screen.

6. (currently amended) A computer-readable medium storing a CAD program which provides a modeling mechanism using both two-dimensional and three-dimensional views of a solid object in an integrated manner, the CAD program causing a computer to ~~function as~~ perform:

~~two-dimensional drawing generating means for generating a~~ plurality of orthographic projection views representing ~~two-dimensional drawing that represents~~ a three-dimensional model ~~being~~ defined as a collection of three-dimensional geometric features;

~~two-dimensional drawing display means for displaying the generated~~ orthographic projection views ~~two-dimensional drawing~~ on a monitor screen;

~~graphic element selection means for selecting a graphic element contained in the~~ orthographic projection views ~~two-dimensional drawing being displayed~~ on the monitor screen; and

~~three-dimensional feature selection means for identifying one of the three-dimensional geometric features that corresponds to the selected graphic element selected by the graphic element selection means, and setting the identified geometric feature to a selected state for further manipulation.~~

7. (new) The three-dimensional CAD system according to claim 1, wherein the orthographic projection views are hierarchically structured and support overlaid views.

8. (new) The three-dimensional CAD system according to claim 1, further comprising:

database means for storing a database of the orthographic projection views associated with the three-dimensional geometric features.

al
cmf
9. (new) The three-dimensional CAD system according to claim 8, wherein the three-dimensional feature selection means searches the database for the one of the three-dimensional geometric features corresponding to the selected graphic element.

10. (new) The three-dimensional CAD system according to claim 1, wherein three-dimensional geometric features other than the identified one of the three-dimensional geometric features are masked.

11. (new) The three-dimensional CAD system according to claim 1, wherein the orthographic projection views are defined by the system.

12. (new) The three-dimensional CAD system according to claim 8, wherein the three-dimensional views are formed using Boolean operations on the three-dimensional geometric features.

13. (new) A method for modeling objects in a computer-aided design system, comprising:

extracting geometric form definitions of a plurality of features of the object from a three-dimensional model database;

creating orthographic projection view data of the features;

entering the orthographic projection view data into an orthographic projection view database;

displaying the orthographic projection view data;

identifying a selected one of the features in the orthographic projection view database, the selected one of the features corresponding to a selected region of the displayed orthographic projection view data; and

displaying a three-dimensional view of the object with emphasis on the selected one of the features.

14. (new) The method according to claim 13, wherein the extracting, creating, entering, displaying the orthographic projection view data, identifying, and displaying the three-dimensional view are performed in sequence.

15. (new) The method according to claim 13, further comprising:

displaying the orthographic projection views and the three-dimensional views on the monitor screen simultaneously.

16. (new) A computer-aided design (CAD) system having a modeling mechanism that uses both two-dimensional and three-dimensional views of a solid object in an integrated manner, comprising:

a two-dimensional drawing generating unit which generates a plurality of orthographic projection views representing a three-dimensional model defined as a collection of three-dimensional geometric features;

a display which displays the generated orthographic projection views;

a graphic element selection unit which selects a graphic element contained in the orthographic projection views displayed on the display; and

Serial No. 09/875,888

Docket No.: 1095.1187

add
a three-dimensional feature selection unit which identifies one of the three-dimensional geometric features that corresponds to the graphic element selected by the graphic element selection unit, and which sets the identified geometric feature to a selected state for further manipulation.
